Relationship between longevity and lifeline: a manual study of 100 patients

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Summary
The relationship between length of lifeline and age at death has been evaluated in 100 consecutive autopsies. A highly significant association between the two was discovered which was strengthened further when hand size was controlled for. We feel that a powerful new prognostic sign may thus be within grasp.

Introduction
Palmistry is concerned with the interpretation of the lines on the hand which indicate the development of various personality traits as the subject matures and develops throughout his life[1]. Knowledge of past, present and future events can be gained from studying these lines. The lifeline is an indication of constitution and physical well-being[1] and of general vitality[2] while its length indicates natural life expectancy apart from accidents[3].

Such beliefs have not been formally tested. We have therefore examined the relationship between lifeline length and age at death. We have also examined the influence of hand size on longevity.

Method
Observations were undertaken by a single observer in 100 consecutive autopsies. The lengths of the lifeline in both hands were measured by laying a pre-stretched piece of string (Figure 1) along the line before transferring to a ruler to read off the length to the nearest millimetre. The lifeline was identified with reference to the work of Cheiro (1866-1936), undisputed doyen of palmistry[3]. During the measurements the hands were prised open and maintained in a standard posture by an experienced mortuary technician.

It is clear from Cheiro's own illustrations of palms that the lifeline has a maximum course over which it may run. This would extend from the intersection of the distal end of the lifeline with the radial edge of the hand to the intersection of the proximal end with the distal palmar crease (Figure 2). This potential maximum lifeline length was also measured as a way of controlling for hand size. The ratio of actual lifeline length to its potential maximum was calculated. We called this the corrected lifeline ratio.

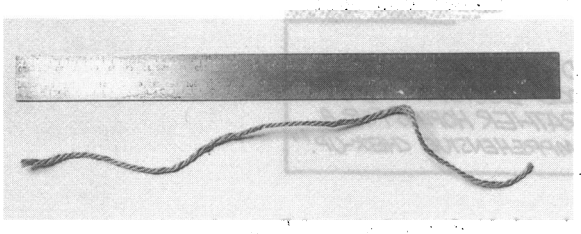

Figure 1. Ozone-friendly measuring equipment

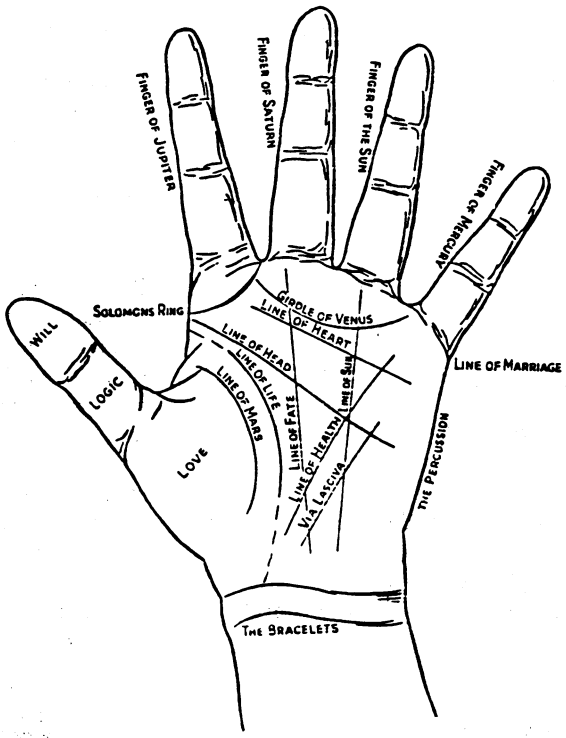

Figure 2. Palmar map showing actual and potential maximum (broken line) lifeline

The age at death was taken from the hospital notes and recorded to the nearest whole year. Analysis of the results was not undertaken till completion of the study and was performed by one of us (PGN) not involved with the data collection.

Statistics
For statistical analysis we considered the Program for Analysis of Log-linear Multi-dimensional contingencies (PALM) using an iterative proportional fitting procedure[4]. However, this proved incomprehensible and we satisfied ourselves with the well-proven dredging procedures of Pearson's correlations and stepwise regression analysis.

Results
Actual and potential maximum lifeline lengths were measured on both hands of 63 males and 37 females. Table 1 shows the correlation matrix obtained and Figure 3 shows a scatterplot of the lifeline ratio against age at death. A close association was demonstrated by regression analysis which yielded the following equation which was not materially

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Table 1. Correlation matrix for lifelines and age at death

	Age	*P<*
RLL	0.39 (0.21-0.54)●	10^{-5}
LLL	0.34 (0.15-0.5)	10^{-3}
RLL/max	0.55 (0.4-0.88)	10^{-8}
LLL/max	0.43 (0.25-0.58)	10^{-5}

R(L)LL, Right (left) lifeline length
max, potential maximum for lifeline length
●95% confidence intervals

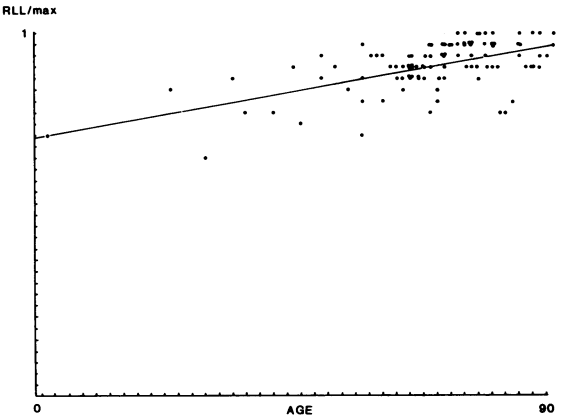

Figure 3. Scatterplot of lifeline ratio (RLL/max) against age at death

improved by incorporation of data from the left hand:
age at death=105* (Right corrected lifeline ratio)−27
[F statistic for slope=42.03, $P<10^{-8}$; 95% confidence intervals 73-138]

Discussion

In present enlightened times we are all being urged to approach patients in a holistic fashion. This implies, if not the use, then certainly the evaluation of alternative practices. Alternative diagnostic aids are much in vogue at present especially in blue-rinse and green-consciousness circles. Psychodiagnostics is not a new brand of monoclonal radioimmunoassay but a group of long-established diagnostic aids which includes phrenology, iridology, physiognomy and palmistry. The interpretation of bumps on the skull has had its heyday while iridology has recently been tested and found wanting[5].

Physiognomy has its uses - we can for example tell a smoker from his or her facial wrinkles[6] but, to our knowledge, palmistry has not come under formal scrutiny. Palmistry has been the focus of heated argument since first mention of its techniques in Indian and Chinese manuscripts of at least 3000 years ago. The science and popularity of the subject were brought to their peak by society palmist Louis Hamon, better known by his pseudonym of Cheiro. Cheiro made many predictions from scrutiny of his clients' palms including forecasting the course of the career of the famous barrister Marshall Hall, and the dates of death of Queen Victoria and King Edward VII. Not moving in such elevated circles we have not attempted to test such predictions. The present study has therefore attempted an evaluation of a single aspect of palmistry, namely, the relationship between length of lifeline and longevity.

We have minimized the confounding effect of hand size (ie the bigger your hands the longer you live) by expressing the length of the lifeline as a ratio of the theoretical maximum it could run. Using this ratio we have found a strong statistical correlation, particularly for the right hand, and age at death. What are the explanations for such a finding? Observer bias is possible though this was minimized by concealing the hypothesis from the measurer and recording age from the notes after the lines had been measured. With increasing age we all become more wrinkly and this may equally apply to palmar creases such that they elongate with age. Unravelling this would require a case-control study with living controls (or better still an 80 year prospective study with investigators meeting every 10 years in exotic locations to report preliminary results). However what if these findings are real and not merely chance correlation? They would appear then to support not only traditional beliefs, but, reading between the lines, a substantial body of biblical and literary acceptance: from the Old Testament view that the 'length of days is in her right hand . . .' (Proverbs iii, 16) (there is nothing sinister in this) to William Blake's 'infinity in the palm of your hand'. Such findings would have important financial and ethical considerations for the use of resources in a cash-limited health service (not to mention plastic surgeons who may wish to extend their private practice and their patients' lifelines). It would, moreover, be a handsome gesture and augur well for future relationships with general managers if the diagnostic dexterity of a glance at the hands (to see whether an illness is the patient's last) were to dispense with these costly blood tests and X-rays. Lifeline measurements are far cheaper than current medical screening - and lucky individuals with lengthy lifelines

Figure 4. Reproduced with kind permission of Bernard Cookson and Hospital Doctor

could be spared the tedium of altering life style or taking treatment. This would of course have profound repercussions for health education which might need targeting to at-risk groups with short lifelines. Doubtless, molecular biology will in the fullness of time shed some light on the pathogenetic mechanisms mediating mortality and lifeline, while palmar topography will surely enter every undergraduate curriculum.

Orthodox medicine has previously ignored palmistry - some would say to its credit. In the light of the present statistically impressive findings however it remains for properly conducted prospective multicentre studies to define the predictive value of lifeline length in various populations. Whilst being aware of possible consumer resistance (Figure 4), our results suggest that a new clinically useful prognostic indicator may be at hand.

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